

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (Currently Amended) A system for managing network components, including storage devices and digital data processors, comprising:

a first component that maintains a first representation of a topology of the storage devices and digital data processors in the network and that generates an event notification indicative of a change to the topology with respect to the network;

a second component in communication with the first component, the second component maintaining a second representation of the topology and responding to the event notification by accessing the first representation;

determining a discrepancy between the event notification and an attribute of any of the first and second representations;

selectively disregarding the event notification or recovering the second representation from one or more attributes of the first representation in response to determining the discrepancy, wherein disregarding the event notification comprises taking no action to synchronize the first and second representations in response to the event notification.

2. (Previously Presented) The system of claim 1, wherein the network further includes a plurality of hosts, each coupled with one or more storage devices over the network;

one or more agents each associated with one or more of the hosts, each agent generating a scan identifying attributes of any of (i) the host with which it is associated, (ii) one or more of the storage units to which that host is coupled, and (iii) a relationship therebetween; and wherein the agents are in communication coupling with the first component, wherein the agents transmit the scan to the first component.

3. (Previously Presented) The system of claim 2, wherein the agents transmit the scans to the first component asynchronously with respect to one another.

4. (Previously Presented) The system of claim 1, wherein the first representation comprises scans received from one or more agents.

5. (Previously Presented) The system of claim 2, wherein the hosts comprise digital data processors and the agents execute on the host digital data processors.

6. (Previously Presented) The system of claim 5, wherein the network comprises a first network, further comprising a manager digital data processor that is coupled to the host digital data processors via a second network, wherein the first and second components execute in connection with the manager digital data processor.

7. (Currently Amended) The system of claim 1, further comprising functionality that recovers the second representation by performing at least one of the following operations:

[[i)]] clearing the second representation and rebuilding that representation from attributes of the first representation;

[[ii)]] comparing the first and second representations in whole or in part, and copying from the first representation to the second representation attributes missing from the latter, while any of deleting or marking as missing attributes in the second representation indicative of components present in the second representation but not in the first representation; and

[[iii)]] copying from the first representation to the second representation one or more attributes indicative of any of (a) a component or relationships represented by an attribute in connection with which the discrepancy occurred, and (b) a component or relationship in a region represented by an attribute in connection with which the discrepancy occurred.

8. (Currently Amended) A system for managing a network of components, including storage devices and digital data processors, comprising:

a first component that maintains a first representation of a topology of the storage devices and digital data processors in the network and that generates an event notification indicative of a change to the topology with respect to the network;

a second component in communication with the first component and responding to the event notification by:

accessing the first representation;

disregarding the event notification in response to determining at least one of:

[[i]] the event notification is indicative of addition of a new component to the network and an attribute of the first representation is indicative of absence of that component from the topology;

[[ii]] the event notification is indicative of addition of a relationship between components of the topology and an attribute of the first representation is indicative of absence of that relationship from the topology;

[[iii]] the event notification is indicative of addition of a relationship between components of the topology and an attribute of the second representation is indicative of the absence from the topology of one of the components to that relationship;

[[iv]] the event notification is indicative of a missing component of the topology and an attribute of the second representation indicative of the absence of that component from the topology;

[[v]] the event notification is indicative of a missing component of the topology and an attribute of the second representation indicates representation of that component in the second representation, but the absence of that component from the topology;

[[vi]] the event notification is indicative of a missing relationship between components of the topology and an attribute of the second representation is indicative of an absence of that relationship in the second representation; or

[[vii]] the event notification is indicative of a missing relationship in the topology and an attribute of the second representation indicates inclusion of that relationship in the second representation, but the absence of that component from the topology.

9. (Currently Amended)) A system for managing a network of components, including storage devices and digital data processors, comprising:

a first component that maintains a first representation of a topology of the storage devices and digital data processors in the network and that generates an event notification indicative of a change to the topology with respect to the network;

a second component in communication with the first component, the second element maintaining a second representation of the topology and responding to the event notification by
accessing the first representation;
determining a discrepancy between the event notification and an attribute of any of the first and second representations; and
selectively recovering the second representation from one or more attributes of the first representation in response to determining at least one of:

[[i]] the event notification is indicative of addition of a new component to the topology and an attribute of the first representation is indicative of the presence of that component;

[[ii]] the event notification is indicative of addition of a relationship between components of the topology and an attribute of the second representation is indicative of the presence of that relationship;

[[iii]] the event notification is indicative of modification of an attribute of a component of the topology and an attribute of the second representation is indicative of the absence from the topology of that component; or

[[iv]] the event notification is indicative of modification of an attribute of a component of the topology and an attribute of the second representation is indicative of inclusion of that component in the second representation but its absence from the topology.

10. (Currently Amended) A method of managing a network of components, including storage devices and digital data processors, comprising:

maintaining a first representation of a topology of the storage devices and digital data processors in the network and generating an event notification indicative of a change to the topology with respect to the network;

maintaining a second representation of the topology and responding to the event notification by:

accessing the first representation;

determining whether there is a discrepancy between the event notification and an attribute of any of the first and second representations; and

selectively disregarding the event notification or recovering the second representation from one or more attributes of the first representation in response to determining the discrepancy, wherein disregarding the event notification comprises taking no action to synchronize the first and second representations in response to the event notification.

11. (Currently Amended) The method of claim 10, wherein the recovering operations include at least one of the operations comprising:

[[i)]] clearing the second representation and rebuilding that representation from attributes of the first representation;

[[ii)]] comparing the first and second representations in whole or in part, and copying from the first representation to the second representation attributes missing from the latter, while any of deleting or marking as missing attributes in the second representation indicative of components present in the second representation but not in the first representation; and

[[iii)]] copying from the first representation to the second representation one or more attributes indicative of any of (a) a component or relationships represented by an attribute in connection with which the discrepancy occurred, and (b) a component or relationship in a region represented by an attribute in connection with which the discrepancy occurred.

12. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in selectively disregarding the event notification comprises determining an event notification indicative of addition of a new component to the topology and an attribute of the first representation indicative of absence of the new component.

13. (Previously Presented) The method of claim 10, further comprising:
determining an event notification indicative of addition of a new component to the topology and an attribute of the first representation indicative of absence of the new component;
and

determining whether the new component is in the second representation in response to determining that the new component is absent from the first representation; and;

updating the second representation to indicate that component's status is suspect in response to determining that the new component is in the second representation.

14. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in performing the recovery operation on the second representations comprises determining an event notification indicative of addition of a new component to the topology and an attribute of the first representation indicative of the presence of the new component.

15. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in selectively disregarding the event notification comprises determining an event notification indicative of addition of a relationship between components of the topology and an attribute of the first representation indicative of absence of that relationship.

16. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in performing the recovery operation on the second representations comprises determining an event notification indicative of addition of a relationship between components of the topology and an attribute of the second representation indicative of the presence of that relationship.

17. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in selectively disregarding the event notification comprises determining an event notification indicative of addition of a relationship between components of the topology and an attribute of the second representation indicative of the absence from the topology of one of the components to that relationship.

18. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in performing the recovery operation on the second representations comprises determining an event notification indicative of modification of an attribute of a component of the topology and an attribute of the second representation indicative of the absence from the topology of that component.

19. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in performing the recovery operation on the second representations comprises determining an event notification indicative of modification of an attribute of a component of the topology and an attribute of the second representation indicating presence of representation of that component in the second representation but its absence from the topology.

20. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in selectively disregarding the event notification comprises determining an event notification indicative of a missing component of the topology and an attribute of the second representation indicative of the absence of that component from the topology.

21. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in selectively disregarding the event notification comprises determining an event notification indicative of a missing component of the topology and an attribute of the second representation indicates inclusion of that component in the second representation, but the absence of that component from the topology.

22. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in selectively disregarding the event notification comprises determining an event notification indicative of a missing relationship between components of the topology and an attribute of the second representation indicative of absence of that relationship in the second representation.

23. (Previously Presented) The method of claim 10, wherein determining the discrepancy that results in selectively disregarding the event notification comprises determining an event notification indicative of a missing relationship in the topology and an attribute of the second representation indicates inclusion of that relationship in the second representation, but the absence of that component from the topology.

24. (New) The system of claim 1, wherein the recovering of the second representation is performed in response to the determined discrepancy comprising the first

representation not reflecting the change indicated by the event notification and the second representation reflecting the change indicated by the event notification.

25. (New) The method of claim 10, wherein the recovering of the second representation is performed in response to the determined discrepancy comprising the first representation not reflecting the change indicated by the event notification and the second representation reflecting the change indicated by the event notification.

26. (New) The system of claim 1, wherein the event notification is disregarded in response to the determined discrepancy comprising the first representation and second representation not reflecting the change indicated by the event notification.

27. (New) The method of claim 10, wherein the event notification is disregarded in response to the determined discrepancy comprising the first representation and second representation not reflecting the change indicated by the event notification.

28. (New) The system of claim 1, wherein the event notification indicates that a device was added to the first representation, wherein the recovering of the second representation is performed in response to the determined discrepancy comprising the first representation not reflecting the added device and the second representation reflecting the added device, and wherein the event notification is disregarded in response to the determined discrepancy comprising the first representation and the second representation not reflecting the added device.

29. (New) The method of claim 10, wherein the event notification indicates that a device was added to the first representation, wherein the recovering of the second representation is performed in response to the determined discrepancy comprising the first representation not reflecting the added device and the second representation reflecting the added device, and wherein the event notification is disregarded in response to the determined discrepancy comprising the first representation and the second representation not reflecting the added device.